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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,225	11/03/2003	Michiel van Nieuwstadt	81088302	3076

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EXAMINER

NGUYEN, TU MINH

ART UNIT PAPER NUMBER

3748

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/700,225	Applicant(s) NIEUWSTADT, MICHEL VAN	
	Examiner Tu M. Nguyen	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-26 is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 27-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An Applicant's Amendment filed on September 9, 2004 has been entered. Claims 1, 3, 15, 18, and 24 have been amended; and claims 25-32 have been added. Overall, claims 1-32 are pending in this application.

Drawings

2. The amended drawings filed on September 9, 2004 are objected to because in Figure 1B, numeral "104" must be pointed to the I/O port. Correction is required.

Claim Objections

3. Claims 18, 27, and 28 are objected to because:

- Claim 18 should not depend on claim 13 because claim 13 is directed to a "system" and claim 18 is directed to a "method". As such, on line 1 of the claim, "13" should probably read --17--.

- Claim 27, based on Figure 2, "first" on line 2 should read --second--.

- Claim 28, also based on Figure 2, "second" on line 2 should read --first--.

Moreover, since there are now two claims 29 in the application, applicant should renumber the second new claim 29 and claim 30 to become claims 30 and 31, respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-14 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, because the claims recite the limitation "said oxidation catalyst" in claims 12 and 21. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 10, 11, 15, 16, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi et al. (Japan Publication 08-284638).

Re claims 1 and 15, as shown in Figure 1, Taniguchi et al. disclose a diagnostic system and a diagnostic method for an exhaust gas aftertreatment system coupled downstream of an internal combustion engine (13), the system comprising:

- an emission control system comprising at least a particulate filter (11), the emission control system coupled downstream of an internal combustion engine;
- an exhaust sensor (21) coupled only upstream of the emission control system, providing a signal indicative of an exhaust gas pressure upstream of the emission control system; and

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- a computer storage medium (31) having a computer program encoded therein, comprising code for estimating a pressure drop across the particulate filter based on at least the sensor signal (see at least the translated Abstract).

Re claims 2 and 16, in the diagnostic system and method of Taniguchi et al., the internal combustion engine is a diesel engine.

Re claim 3, in the diagnostic system of Taniguchi et al., the sensor (21) is an absolute pressure sensor.

Re claim 10, in the diagnostic system of Taniguchi et al., the computer storage medium further comprises code for providing an indication that particulate filter regeneration is required based on said estimated pressure drop across the particulate filter.

Re claims 11 and 19, in the diagnostic system and method of Taniguchi et al., the estimating of the pressure drop across the filter is further based on an atmospheric pressure (PG) (see the translated Abstract).

Re claim 20, in the method of Taniguchi et al., the estimating is further based on mass airflow.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-7 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. as applied to claims 1 and 16, respectively, above, in view of Maaseidvaag et al. (U.S. Patent 6,167,696).

Re claims 4 and 17, the diagnostic system and method of Taniguchi et al. disclose the invention as cited above, however, fail to disclose that the system further comprises an oxidation catalyst coupled upstream of the particulate filter.

As shown in Figure 1, Maaseidvaag et al. teach an exhaust gas purification system comprising an oxidation catalyst (16) and an integral particulate filter/NO_x trap (22) located downstream of the oxidation catalyst. The oxidation catalyst is utilized to oxidize a majority of HC, CO, and NO_x when the oxidation catalyst reaches its operational range (lines 31-38 of column 2). It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the oxidation catalyst taught by Maaseidvaag et al. in the system and method of Taniguchi et al., since the use thereof would have also reduced harmful HC, CO, and NO_x emissions in the exhaust gas.

Re claims 5-7 and 18, in the modified system and method of Taniguchi et al., the emission control system further comprises a Lean NO_x Trap (LNT) ((54) in Maaseidvaag et al.) coupled downstream of the particulate filter.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. in view of Maaseidvaag et al. as applied to claim 6 above, and further in view of legal precedent.

The modified system of Taniguchi et al. discloses the invention as cited above, however, fails to disclose that the LNT is coupled upstream of the particulate filter.

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Taniguchi et al. disclose the claimed invention except for the LNT is coupled upstream of the particulate filter. It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange Taniguchi et al. so that the LNT is positioned upstream from the particulate filter, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. in view of Maaseidvaag et al. as applied to claim 5 above, and further in view of design choice.

The modified system of Taniguchi et al. discloses the invention as cited above, however, fails to disclose that the NO_x aftertreatment device is a urea-based SCR catalyst.

With regard to applicants claim directed to a urea-based SCR catalyst as the NO_x aftertreatment device, the specification of such would have been an obvious matter of design choice well within the level of ordinary skill in the art depending on design variables, such as the desired operational temperature range of the catalyst, availability of reductants, etc. Moreover, there is nothing in the record which establishes that the specification of such presents a novel of unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

Allowable Subject Matter

12. Claims 24-26 are allowed because the exhaust gas sensor is claimed to be coupled only at a location upstream of the second device or the oxidation catalyst.

Claims 27-32 are objected to and would be allowable if rewritten to overcome the claim objections outlined above.

Response to Arguments

13. Applicant's arguments with respect to the references applied in the previous Office Action have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Communication

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833 or (571) 272-4862 to be effective on November 24, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623 or (571) 272-4859 to be effective on November 24, 2004. The fax phone number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Tu M. Nguyen

TMN

Tu M. Nguyen

November 14, 2004

Patent Examiner

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